

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A semiconductor assembly, comprising:

a submount having a plurality of conductive traces on a surface and a plurality of conductive vias that pass through a body of the submount;

a semiconductor array having a top portion and a bottom portion, the semiconductor array being comprised of semiconductor elements having first electrical contacts on the top portion and second electrical contacts on the bottom portion, said semiconductor array being attached to said submount such that said second electrical contacts of the semiconductor elements are electrically connected to [a plurality of]said conductive vias; and

a plurality of bonding wires electrically connecting said first electrical contacts of the semiconductor elements to at least two of the conductive traces.
2. (Original) A semiconductor assembly according to claim 1, wherein said semiconductor array includes a plurality of vertical cavity surface emitting lasers.
3. (Original) A semiconductor assembly according to claim 1, wherein said semiconductor array includes a plurality of detectors.
4. (Original) A semiconductor assembly according to claim 1, wherein said submount includes a mounting well, wherein said semiconductor array is in said mounting well, and

wherein said semiconductor array includes a top surface that does not protrude from said mounting well.

5. (Original) A semiconductor assembly according to claim 1, wherein each of the conductive traces includes a contact pad.

6. (Original) A semiconductor assembly according to claim 5, further including a tab bonding connector electrically connected to a plurality of contact pads.

7. (Original) A semiconductor assembly according to claim 1, further including a locating spacer that extends from said submount.

8. (Original) A semiconductor assembly according to claim 7, further including an optical coupler on said locating spacer, wherein said optical coupler is aligned with said semiconductor array.

9. (Original) A semiconductor assembly according to claim 1, wherein said submount includes ceramic.

10. (Original) A semiconductor assembly according to claim 1, wherein at least one of said plurality of conductive vias electrically connects to one of the conductive traces.

11. (Original) A semiconductor assembly according to claim 1, further including a conductive pad electrically connected to one of the conductive traces.

12. (Original) A semiconductor assembly according to claim 11, further including a printed circuit board electrically connected to said conductive pad.

13. (Currently Amended) A semiconductor assembly, comprising:

a submount comprised of a lower portion, a conductive trace on the lower portion, an upper portion over the lower portion, and a plurality of conductive traces on the upper portion, wherein the lower portion and the conductive trace on the lower portion extend beyond the upper portion to define a mounting surface;

a semiconductor array having a top portion and a bottom portion, the semiconductor array being comprised of a plurality of semiconductor elements having first electrical contacts on the top portion and second electrical contacts on the bottom portion, said semiconductor array being attached to said mounting surface [and is] such that said second electrical contacts of the plurality of the semiconductor elements are electrically connected to the conductive trace on the lower portion; and

a plurality of bonding wires electrically connecting said first electrical contacts of the plurality of semiconductor elements to the plurality of conductive traces on the upper portion.

14. (Original) A semiconductor assembly according to claim 13, wherein said semiconductor array includes a plurality of vertical cavity surface emitting lasers.

15. (Original) A semiconductor assembly according to claim 13, wherein said semiconductor array includes a plurality of detectors.

16. (Original) A semiconductor assembly according to claim 13, wherein each of said plurality of conductive traces on the upper portion includes a contact pad.

17. (Original) A semiconductor assembly according to claim 16, further including a tab bonding connector electrically connected to the contact pad.

18. (Original) A semiconductor assembly according to claim 13, further including a locating spacer that extends from said submount.

19. (Original) A semiconductor assembly according to claim 18, further including an optical coupler on said locating spacer, wherein said optical coupler is aligned with said semiconductor array.

20. (Original) A semiconductor assembly according to claim 13, wherein said submount includes ceramic.

21. (Original) A semiconductor assembly according to claim 13, further comprising:

a plurality of contact pads on the submount; and

a printed circuit board electrically connected to the plurality of contact pads.

22. (Original) A semiconductor assembly according to claim 13, wherein said submount includes a mounting well, wherein said semiconductor array is in said mounting well, and wherein said semiconductor array includes a top surface that does not protrude from said mounting well.